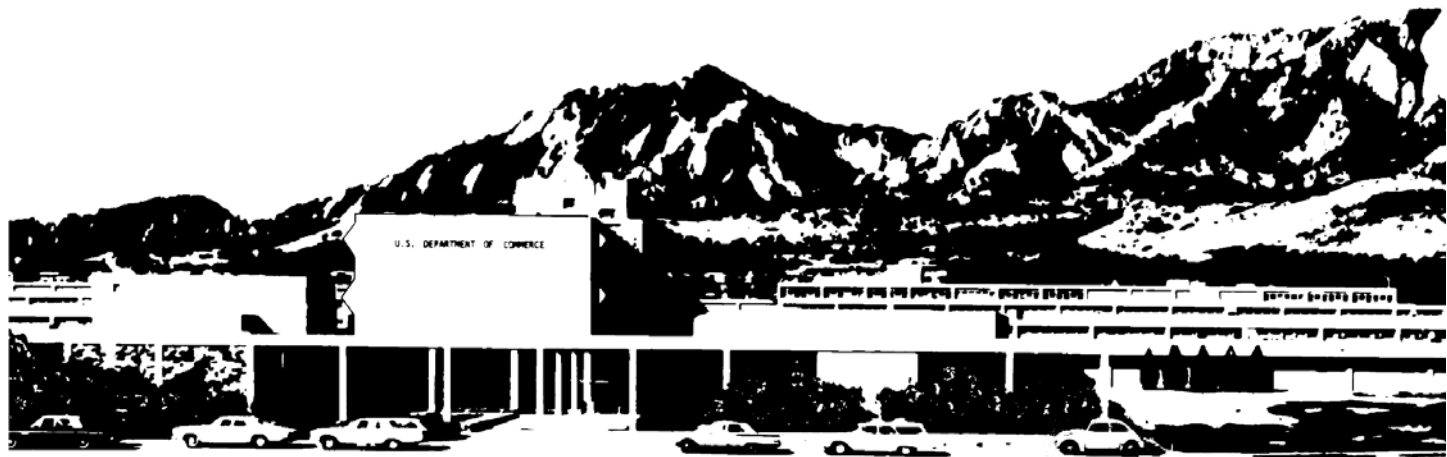


SOFM 2006

PROGRAM

A NIST symposium for photonic and fiber measurements  
September 19-20, 2006 – Boulder, Colorado



Tuesday, September 19, 2006

8:30      **Opening Remarks:** Paul Williams, NIST, Symposium Co-Chair

**Session I. Fiber Sensors, Chair: Gordon Day, NIST**

- 8:45      **INVITED:** Photonic Sensor Market Evolution, Opportunities and Metrology Needs, David Krohn, *Light Wave Venture LLC*
- 9:15      Modulation Function Study of Coupling Based Intensity Modulated Fiber-Optic Sensors, Johan Jason<sup>1,2</sup>, Hans-Erik Nilsson<sup>1</sup>, Bertil Arvidsson<sup>1,3</sup>, Anders Larsson<sup>2</sup>, <sup>1</sup>*Department of Information Technology and Media, Mid-Sweden University*, <sup>2</sup>*Fiberson AB*, <sup>3</sup>*Ericsson Network Technologies AB*
- 9:30      Characteristics of Spun Fiber Grating Sensors, Yong Wang and Chang-Qing Xu, *Department of Engineering Physics, McMaster University, Canada*
- 9:45      Metrology of Integrated Waveguide Devices and Systems Using Near-Field Scanning Optical Microscopy, Guangwei Yuan and Kevin L. Lear, *Electrical and Computer Engineering Department, Colorado State University*
- 10:00      **BREAK**

**Session II. Power-Related Metrology, Chair: Alan McCurdy, OFS**

- 10:30      Return Loss Measurement in the Presence of Variable Insertion Loss Using Optical Frequency Domain Reflectometry, Stephen Kreger, Mark Froggatt, Dawn Gifford, Matthew Wolfe, and Brian Soller, *Luna Technologies*
- 10:45      High-Power Nonlinearity of Optical Fiber Power Meters for Pump Lasers at 980 and 1480 nm, I. Vayshenker and S. Yang, *NIST*, R. Swafford, *OZ Optics Ltd.*
- 11:00      Novel Approach for Non-Intrusive “Clip-On” Fiber Monitoring, Gang He, Daniel Gariépy, Hongxin Chen, Jean Théberge, and Gregory W. Schinn, *EXFO Electro-Optical Engineering, Inc.*
- 11:15      Measurement Technique for Stimulated Brillouin Scattering Threshold, Per Olof Hedekvist and Anne Andersson, *SP, Swedish National Testing and Research Institute*
- 11:30      Butt-Joint Splice with Refractive Index Matching Material for High Power Light in Optical Fiber Communications, Ikutaro Ogushi, Hisashi Izumita, Kuniaki Tanaka, Fumihiko Ito, and Masahito Aarii, *NTT Access Network Service Systems Laboratories, NTT Corp., Japan*
- 11:45      High Speed PRBS for Detection of Defects in Fibers and Fiber Connectors, S. Rangaswamy, D. Lao, and E. van Doorn, *Intelligent Automation Inc.*
- 12:00      Experimental Investigation on Special Shaped Fibers Coupling with InP-Based Planar Lightwave Circuit Chips, Xu Liu, Jinbiao Xiao, Xiaohan Sun, *Department of Electronic Engineering, Southeast University, P.R. China*
- 12:15      **LUNCH**

**Session III. Spectroscopic and Frequency Metrology, Chair: Janet Jackel, Telcordia**

- 1:45      **INVITED:** Fiber Frequency Combs: Development and Applications, N. R. Newbury, W. C. Swann, I. Coddington, and J. J. McFerran, *NIST*
- 2:15      Generation of a Frequency Comb by FWM in SOAs Enhanced by Raman, Ana Carrasco-Sanz<sup>a</sup>, Sonia Martín-López<sup>a</sup>, Miguel González-Herráez<sup>a,b</sup>, Pedro Corredera<sup>a</sup>, Maria Luisa Hernanz<sup>a</sup> and Laura Abrardi<sup>a</sup>, <sup>a</sup>*Departamento de Metrología, Instituto de Física Aplicada, (CSIC) Madrid*, <sup>b</sup>*Departamento de Electrónica, Universidad de Alcalá, Spain*
- 2: 30      Comparison of Saturated Absorption Spectra of Acetylene Gas Inside Photonic Bandgap Fibers, K. Knabe, R. Thapa, O. L. Weaver, B. R. Washburn, and K. L. Corwin, *Dept. of Physics, Kansas State University*
- 2:45      CW Supercontinuum Generation in Standard Optical Fiber over the O, E, S and C Communication Bands, Laura Abrardi<sup>a</sup>, Sonia Martín-López<sup>a</sup>, Ana Carrasco-Sanz<sup>a</sup>, Miguel González-Herráez<sup>a,b</sup>, Pedro Corredera<sup>a</sup> and Maria Luisa Hernanz<sup>a</sup>, <sup>a</sup>*Departamento de Metrología, Instituto de Física Aplicada, (CSIC), Madrid*, <sup>b</sup>*Departamento de Electrónica, Universidad de Alcalá, Spain*
- 3:00      A C-Band Optical Frequency Synthesizer Using 1.5 Micron NICE OHMS Frequency Standards and an Optical Frequency Comb Generator, C. S. Edwards<sup>1,2</sup>, H.S. Margolis<sup>1</sup>, G.P. Barwood<sup>1</sup>, P. Gill<sup>1,2</sup>, and W.R.C. Rowley<sup>1</sup>, <sup>1</sup>*National Physical Laboratory*, <sup>2</sup>*Blackett Laboratory, Imperial College, UK*
- 3:15      **BREAK**

**Session IV. Dispersion Metrology, Chair: Greg Schinn, EXFO**

- 3:45      **INVITED:** PMD: Measurement Method Linkages, T.A. Hanson, *Corning Inc.*
- 4:15      PMD Measurements Using Fixed-Analyzer Technique on a 1000km Amplified Link that Includes ROADMs, Vincent Lecoche<sup>1</sup>, Fabien Sauron<sup>1</sup> and André Champavère<sup>1</sup>, Alexey Turukhin<sup>2</sup> and Enrico Gonzales<sup>2</sup>, <sup>1</sup>*JDSU Commtest Division*, <sup>2</sup>*JDSU Optical Network Research*
- 4:30      Chromatic Dispersion Measurement Technique Utilizing an Unstable Supercontinuum Pulse Source, Sucbei Moon and Dug Y. Kim, *Gwangju Institute of Science Technology (GIST), Republic of Korea*
- 4:45      Accurate Measurement of Chromatic Dispersion Distribution along Dispersion Managed Transmission System, Mirza Imran Baig, Tohru Miyauchi and Masaaki Imai, *Dept. of Electrical & Electronic Engineering, Muroran Institute of Technology, Japan*
- 5:00      Assessment of the Potential Accuracy of a Four Wavelength OTDR to Measure Chromatic Dispersion, David Ives, Joan Hall and Christian Hart, *National Physical Laboratory, UK*
- 5:15      **SESSION CLOSE**
- 6:30      **CONFERENCE RECEPTION / DINNER - RED LION INN**

Wednesday, September 20, 2006

Session V. Tutorial – FTTx Measurement Issues, Chair: André Champavère, JDSU

- 8:30 **INVITED:** Critical Issues Relating to FTTH/PON Testing, Andre Girard, *EXFO E.O. Engineering, Inc.*  
9:00 **INVITED:** WDM-PON for FTTx, Wayne V. Sorin<sup>1</sup>, Chang-Hee Lee<sup>2</sup>, Byoung Y. Kim<sup>1</sup>, <sup>1</sup>*Novera Optics, Inc.*, <sup>2</sup>*Korea Advanced Institute of Science and Technology*  
9: 30 **INVITED:** FTTx Deployment Issues, Jimmy Salinas, *AT&T*  
10:00 **BREAK**

Session VI. Specialty Fibers, Chair: Tom Hanson, Corning Inc.

- 10:30 **INVITED:** Special Requirements for Measurement Techniques Used for POF and Thick Glass Fibers, Olaf Ziemann, *Polymer Optical Fiber Application Center, University of Applied Sciences Nürnberg, Germany*  
11:00 **INVITED:** Characterization of Hole-Assisted Fibers as Single Polarization Fibers and Polarization Maintaining Fibers, Xin Chen, Joohyun Koh, Ming-Jun Li, and Daniel A. Nolan, *Corning Inc.*  
11:30 Micro-Tomographic Reconstruction for Arbitrary Refractive Index Profiling of Optical Fibers, N.M. Dragomir<sup>1</sup>, X. M. Goh<sup>1</sup>, G. Baxter<sup>2</sup> and A. Roberts<sup>1</sup>, <sup>1</sup>*School of Physics, The University of Melbourne*, <sup>2</sup>*School of Electrical Engineering, Victoria University of Technology, Australia*  
11:45 Fictive Temperature Distribution in Highly Ge-Doped Multimode Optical Fibers, M. Lancry<sup>1</sup>, I. Flammer<sup>2</sup>, D. Simons<sup>3</sup>, B. Poumellec<sup>1</sup>, C. Depecker<sup>4</sup>, P. Nouchi<sup>2</sup> and M. Douay<sup>5</sup>, <sup>1</sup>*ICMMO/LPCEs, Université Paris Sud (XI)*, <sup>2</sup>*Draka Comteq France*, <sup>3</sup>*Draka Comteq Fiber BV, Netherlands*, <sup>4</sup>*LSPES, Université des Sciences et Technologies de Lille, France*, <sup>5</sup>*PhLAM, Université des Sciences et Technologies de Lille, France*  
12:00 **LUNCH**

Session VII. Systems Metrology, Chair: Dug Young Kim, GIST

- 1:30 **INVITED:** Monitoring OSNR in Dynamic WDM Network, Y. C. Chung, *Korea Advanced Institute of Science and Technology, Department of Electrical Engineering and Computer Science*  
2:00 Optical Signal Quality Monitoring Based on Asynchronous Amplitude Histogram for DPSK Systems, H. Takara<sup>1</sup>, T. Ohara<sup>1</sup>, and B. Kozicki<sup>2</sup>, <sup>1</sup>*NTT Network Innovation Laboratories, NTT Corp.*, <sup>2</sup>*Osaka University, Japan*  
2:15 **INVITED:** New Methods for Investigating Mode Coupling in Multimode Fiber: Impact on High-Speed Links and Channel Equalization, Stephen E. Ralph, Arup Polley, *Georgia Institute of Technology*, K. D. Pedrotti, R. P. Dahlgren, J. A. Wysocki, *Dept. of Electrical Engineering, University of California, Santa Cruz*  
2:45 A Differential Mode Delay Measurement for a Multimode Optical Fiber with Fourier-Domain Low-Coherence Interferometry, J.Y. Lee, T-J. Ahn, and D.Y. Kim, *Department of Information and Communications, Gwangju Institute of Science and Technology, Republic of Korea*  
3:00 **BREAK**

Session VIII. Workshop

- 3:30 – 5:00 Fiber and Photonic Metrology Roadmapping  
5:00 **SYMPOSIUM CLOSE**

SYMPOSIUM COMMITTEE

P.A. Williams, NIST, Co-Chair, T.J. Drapela, NIST, Co-Chair

A. Barlow, <i>PerkinElmer</i>	M. Hackert, <i>U.S. Navy</i>	D. Krohn, <i>Light Wave Venture</i>
A. Champavère, <i>JDSU</i>	T.A. Hanson, <i>Corning</i>	G. Kuyt, <i>Draka Comteq</i>
G.W. Day, <i>NIST</i>	D. Humphreys, <i>NPL</i>	A. McCurdy, <i>OFS</i>
S.C. Fleming, <i>Univ. of Sydney</i>	J. Jackel, <i>Telcordia</i>	G. W. Schinn, <i>EXFO</i>
D. Franzen, <i>NIST</i>	D.Y. Kim, <i>GIST</i>	C. Shaar, <i>Photon Kinetics</i>
N. Gisin, <i>Univ. of Geneva</i>	P. Kolesar, <i>SYSTIMAX Solutions</i>	H. Takara, <i>NTT</i>

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